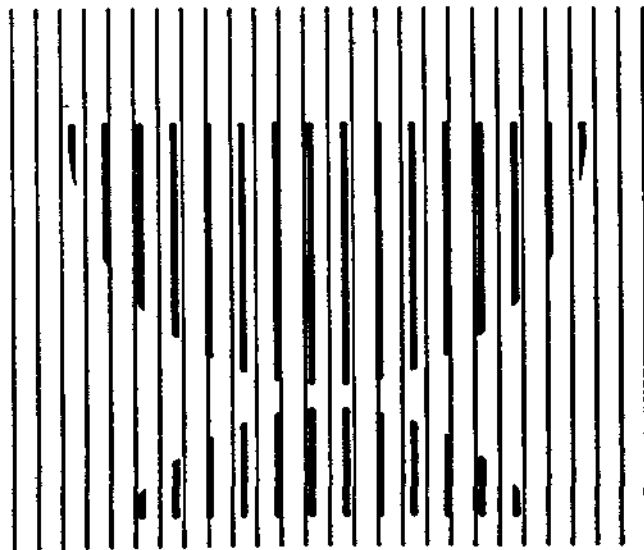


CBO STAFF MEMORANDUM

**SAVINGS FROM A 25 PERCENT REDUCTION
IN THE DEFENSE DEPARTMENT'S FORCES**

June 1990



**CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515**

This memorandum was prepared to document analysis by the Congressional Budget Office on the question of the budget impact of a 25 percent reduction in military force structure. The memorandum was prepared by Michael A. Miller and William P. Myers. Many useful comments and insights were provided by Robert F. Hale and John D. Mayer. Janice M. Johnson typed the many drafts and prepared the document for production.

The participants in the summit negotiations on the budget asked for estimates of the savings that would result from reducing forces by 25 percent. Although the composition of the reduction remained an open question, the intention was that the forces existing in 1990 would be reduced by 25 percent by 1995.

Under the assumptions in this memorandum, the savings from such a force change could total \$84 billion in budget authority in 1995. This would be a 23 percent reduction from the CBO baseline that represents actual 1990 appropriations adjusted for inflation. While 1995 budget authority could fall from \$370 billion, to \$286 billion, the funding for years between 1990 and 1995 is less certain; many paths could lead to the estimate for 1995.

COMPOSITION OF A FORCE REDUCTION

Force structure is the term used to describe the numbers and kinds of Army and Marine Corps divisions, Air Force wings, and Navy ships. It indicates the way in which the Defense Department is organized to exert military power. A reduction in force could be structured to reflect a lower threat in Europe, which would imply a disproportionate reduction in Army and Air Force units geared to defending Europe. Alternatively, it could be structured to recognize a lower global threat, in which case the Navy could be reduced along with the other services. Yet another alternative would recognize different changes in the strategic versus tactical threats and lead to different reductions in those two types of forces.

The estimates in this memorandum are based on the assumption that all forces would be reduced by 25 percent, as summarized in Table 1. Not all forces are neatly divisible by four. The active Army contains 18 divisions in 1990 and the assumption is that four divisions plus one brigade would be cut from the force (where a division typically has three brigades). Aircraft are organized into squadrons and wings, but the estimates assume that, irrespective of this organization, the total number of aircraft is reduced by 25 percent. Similarly, ships are organized into task forces or battle groups, yet the estimates in this memorandum are based on an across-the-board reduction in each type of ship regardless of such organization.

SAVINGS FROM AN ACROSS-THE-BOARD FORCE REDUCTION

The savings from a reduction in force would come in two categories--first, operating and support costs, and second, investment costs. CBO estimates that a 25 percent reduction in force would reduce operating costs by \$52 billion or 14 percent of the total budget for National Defense, while investment costs could be reduced by \$32 billion or 9 percent of the budget total.

TABLE 1. LEVEL OF PRIMARY FORCES IN FISCAL YEAR 1990 AND AFTER A 25 PERCENT CUT
(In numbers of divisions, brigades, aircraft, ships, and missiles) a/

Type of Force	1990 Level	Size of Cut	Level After Cut
Active Army Divisions	18	-4 1/3	13 2/3
Army National Guard Divisions	10	-2 1/3	7 2/3
Active Navy Forces			
Aircraft	1,448	-359	1,089
Ships	476	-115	361
Reserve Navy Forces			
Aircraft	221	-55	166
Ships	33	-8	25
Active Marine Corps Forces			
Marine Brigades (3 divisions/9 brigades)	9	-2 1/3	6 2/3
Aircraft	398	-98	300
Reserve Marine Corps Forces			
Reserve Brigades (1 division/3 brigades)	3	-2/3	2 1/3
Aircraft	136	-33	103
Active Air Force forces			
Strategic Missiles	1,857	-463	1,394
Aircraft	3,123	-777	2,346
Reserve Air Force Forces			
Aircraft	1,742	-433	1,309
Summary of Active and Reserve Forces			
Army Divisions	28	-6 2/3	21 1/3
Marine Brigades	12	-3	9
Strategic Missiles	1,857	-463	1,394
Aircraft	7,068	-1755	5,313
Ships	509	-123	386

NOTE: All aircraft figures refer to primary authorized aircraft (PAA). Figures for ships exclude certain support ships often used in counting toward a 600-ship Navy.

a. Excludes all forces for which the budget data are classified.

Operating and Support Costs

Operating and support (O&S) costs, comprise over half of the defense budget. For 1995, the CBO baseline contains about \$224 billion for personnel, fuel, spare parts, and basing forces.

Costs Associated with Units. CBO projects in its baseline that the Defense Department would spend about \$126 billion in 1995 to operate the current force structure (see Table 2). This is the funding most directly tied to the weapons and people comprising the force structure. It meets the costs of flying the aircraft, steaming the ships, and manning the divisions that would be eliminated. Cutting the force by 25 percent would mean a reduction of \$31 billion or 8 percent of the defense budget projected for 1995.

Overhead. O&S costs are divided between fixed and variable costs. Fixed costs would not change when forces are cut, while the variable costs would be reduced. When estimating the cost impact of force changes, CBO usually assumes that a large portion of O&S costs are fixed because most force changes are small. But, a 25 percent reduction in force is a relatively large change, so some of the costs that CBO usually assumes to be fixed would likely vary.

The costs most closely associated with units—the \$126 billion referred to above—include a slice of the support establishment that provides logistics, base operations, and personnel functions; these functions are apart from the units themselves. This estimate includes a greater slice of the support establishment and calls this increment "overhead." The estimate cuts this category proportionally, although in reality the adjustment is not likely to be so smooth or straightforward. Reductions in the support establishment are likely to resemble a series of steps. In other words, reductions in forces may cause little or no change in the support establishment until some threshold is reached. Beyond that point, reductions would trigger a sharp reduction in support. However, it is not clear where those thresholds are.

For example, several units may be stationed on one base, but eliminating one unit will not necessarily reduce the need for military police to guard the entrances to the base. Yet at some point after eliminating more units, the base could be consolidated so that the number of entrances (and hence the demand for military police) would shrink, representing a reduction in overhead costs. The estimate that a 25 percent reduction in forces would reduce the overhead by \$21 billion may place an upper bound on savings from this category of operating and support costs.

TABLE 2. 1995 BUDGETARY SAVINGS ASSOCIATED WITH A 25 PERCENT REDUCTION IN MILITARY FORCES, ASSUMING REDUCTIONS ARE FULLY IMPLEMENTED BY 1995

Budget Category	Baseline Budget Authority in 1995 a/ (billions of dollars)	Reduction in Budget Authority from 25 Percent Cut (billions of dollars)	Reduction as Percent of Total Defense Budget
Operating and Support Categories			
Operating Costs Associated with Units That Are Cut	126	31	8
Overhead Operating Costs b/	83	21	6
Operating Costs for Intelligence and Communications Programs	15	0	0
Investment Categories			
Procurement of Weapons and Military Construction	88	22	6
Development, Test, and Evaluation of Weapons	41	10	3
Basic Research, Nuclear Weapons Development, Environmental Cleanup, and Other Activities	17	0	0
Total National Defense (Function 050)	370	84	23

NOTE: Details may not add to totals because of rounding.

a. Baseline budget authority equals 1990 authority adjusted for inflation.

b. Overhead operating costs consist of funding for most of the support establishment including base operations, central logistics, training, and management headquarters.

Intelligence and Communications. Intelligence and communications programs may be one category of the defense budget that would remain fixed when other forces are cut back. One of the factors often cited in cutting forces is the length of warning time that the United States would have before an attack. Preserving the current resources devoted to intelligence and communications programs might also preserve the warning time and the justification for the force reductions.

Still, warning time may be more a function of the change in geopolitical conditions than of the budget resources devoted to these programs. If this is the case, then some cuts could be made in the \$15 billion projected for them in 1995, although no cuts are assumed for this memorandum.

In short, CBO's computed savings in operating and support costs amount to \$52 billion or 14 percent of the whole budget. This assumes cuts in all O&S categories, but central intelligence and communications programs vary.

Investment Programs

The second category of savings from reducing forces would occur in the investment accounts of the defense budget. These accounts fund research into new or improved weapons, procurement of weapons, and construction of facilities. In the baseline for 1995, investment accounts total \$146 billion.

Procurement and Military Construction. With smaller forces there would be a reduced demand for large quantities of weapons. To maintain the same quantity and average age of equipment per unit in the force structure, procurement programs might need to be only 75 percent as large under a force cutback of 25 percent. Consequently, CBO computed a \$19 billion reduction in the baseline's projection for weapons procurement--5 percent of total budget authority for 1995, but 25 percent of the projection for procurement.

Some arguments could be made for a deeper cut in procurement while other arguments could be made for less of a cut. For example, the units cut from the force will in some cases have equipment that the units remaining in the force need. If this equipment is redistributed to the remaining units, further procurement of the item could be curtailed altogether instead of being reduced by just 25 percent. On the other hand, if each generation of equipment is more expensive than the preceding generation or if unit costs go up as the result of smaller buy sizes, then procurement funding might be cut by less than 25 percent.

The estimates also assume that a reduction in forces would cause a proportional reduction in the need for military construction to include family

housing. A smaller force would have smaller requirements for basing and facilities. Like the overhead under O&S costs, military construction programs might not decline as smoothly as the total forces or, say, personnel. But, because these thresholds are so uncertain, the estimate makes a general assumption about their existence under a 25 percent cut. Depending on how forces are cut and remaining forces are deployed, it is possible that military construction could be cut very little. It could increase in the short term as forces are geographically redeployed.

Development, Test, and Evaluation of Weapons. If all cost categories described so far were reduced as CBO has estimated, then savings would total \$74 billion or 20 percent of the baseline budget for 1995. But, it can be argued that certain aspects of the Defense Department's research and development program would also be reduced with a reduction in force.

Specifically, the development, test, and evaluation of weapons could decline by 25 percent. In general this is the whole RDT&E account minus basic or theoretical research, totaling about \$41 billion. So a 25 percent cut would save about \$10 billion.

This cut would be warranted if RDT&E is related to the quantity of weapons purchased. For example, if funds are spent to test and evaluate every item as it comes off an assembly line, then 25 percent fewer weapons means a proportionately reduced need for variable test and evaluation funding. Also, the same reduction in the threat that leads to a cut in current force may also lead to a reduced need for the more modern future force structure represented by RDT&E funding.

However, a large part of RDT&E might remain fixed since the same amount of research must be done on a weapon whether 100 items are purchased or 75. A decision to reduce this block of RDT&E funding may be a totally separate policy question from reducing the size of forces, and therefore this \$10 billion reduction may not be appropriate.

Other Defense Costs. The last category of the defense budget covers mostly basic research, nuclear weapons development, and environmental cleanup. CBO does not include any savings from these activities because basic research and environmental cleanup are not related to current force structure and would not necessarily decline as a result of a force cut. Nuclear weapons development is related to force structure, but the division of current and projected funding between weapons production, safety measures, and environmental cleanup is too blurred for a reliable estimate. If Department of Energy funding for nuclear weapons production were to continue at the same pace as in the mid-1980s, then another \$2 billion or \$3 billion might be saved from this account.